

REMARKS:

I. Summary of the Invention

Applicant has discovered sensitive and highly specific methods for detecting or quantifying nucleic acids. A first method, as exemplified by claim 11, comprises providing a nucleic acid probe comprising at least one monomeric LNA moiety and two or more non-identical covalently-attached dyes, wherein at least one dye is fluorescent. The method further comprises contacting the probe with a target nucleic acid such that the probe hybridizes with the target nucleic acid. Lastly, the method comprises measuring the change in fluorescence that is related to the hybridization of the probe with the target nucleic acid.

A second method, as exemplified by claim 24, comprises providing a pair of probes having different nucleic acid sequences. The two probes collectively comprise at least one monomeric LNA moiety and two or more non-identical covalently-attached dyes, wherein at least one dye is fluorescent and each probe comprises at least one dye. The method further comprises contacting the pair of probes with a target nucleic acid such that the two probes hybridize to adjacent segments of the target nucleic acid. The last step of the process comprises measuring the change in fluorescence that is related to the hybridization of the two adjacent probes with the target nucleic acid.

The Office states "the only difference between the instant claims 11 and 24 is that claim 24 is a multiplex assay."¹ This is incorrect. Rather, claims 11 and 24 differ in that claim 11 requires the use of **one nucleic acid probe** to detect or quantify the target nucleic acid, whereas claim 24 requires the use of a **pair of nucleic acid probes** to detect or quantify the target nucleic acid. The number of probes is not indicative of a multiplex format, and, furthermore, either method may be conducted in a multiplexed format (see claims 22 and 37).

¹ Office Action dated 10/01/2009, at page 2, last 2 lines.

II. Status of the Claims

Claims 1-38 are pending, with claims 1-10, 12, 16, 20, 21, 25, 28, 32, and 34 having been withdrawn from consideration. Thus, claims 11, 13-15, 17-19, 22-24, 26, 27, 29-31, 33, and 35-38 are under examination. By this amendment, claims 19 and 24 are amended. The claim amendments are supported by the specification and do not add new matter.²

III. Restriction Requirement

Applicant affirms election, with traverse, of Group II (claims 11-38) and the election of the following species: 1) the probe comprises a donor dye and an acceptor dye, 2) the donor and acceptor pairs comprise fluorescein and LC Red dyes, and 3) the change in fluorescence occurs upon hybridization of the probe with the nucleic acid analyte. Accordingly, claims 1-10 have been withdrawn from consideration as being drawn to a non-elected invention, and claims 12, 16, 20, 21, 25, 28, 32, and 34 have been withdrawn from consideration for being drawn to non-elected species. Upon allowance of a generic claim, however, Applicant will be entitled to consideration of claims to additional species that are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141.

IV. 35 USC § 102 Rejections

Reconsideration is respectfully requested of the rejection of claims 11, 13-15, 17-19, 22-24, 26, 27, 29-31, 33, and 35-38 under 35 USC § 102(a) in view of Ugozzoli et al. (Analytical Biochemistry, 2004, 324:143-152).

For the reasons detailed below, Ugozzoli et al. may not properly be used to support a 35 U.S.C § 102(a) rejection. 35 U.S.C § 102(a) specifically dictates that a person shall be entitled to a patent unless the invention was described in "a printed

² Claim 19 was amended to include the article "a" before the term "Molecular Beacon." Step (c) of claim 24 was amended to recite that the change in fluorescence "is related to the hybridization of the **pair** of nucleic acid probes with the nucleic acid analyte."

publication in this or a foreign country **before** the invention thereof by the applicant for patent."³

The present application has an effective filing date of **June 26, 2003**: although filed on April 6, 2007, the present application properly claims priority to U.S. provisional application serial no. 60/482,684, filed June 26, 2003. The provisional application 60/482,684 and the pending application are essentially identical, thereby providing support for the claims of the pending application.

The Ugozzoli et al. reference has a publication date of **January 1, 2004**, which is more than six months **after** the effective filing date of the present application. Accordingly, Ugozzoli et al. is not prior art under 35 U.S.C § 102(a).

In view of the above, Applicant respectfully requests withdrawal of the rejection of claims 11, 13-15, 17-19, 22-24, 26, 27, 29-31, 33, and 35-38 under 35 USC § 102(a) in view of Ugozzoli et al.

V. Conclusions

In light of the foregoing, the Applicant requests entry of the claim amendments, withdrawal of the claim rejections, and solicits an allowance of all pending claims. The Examiner is invited to contact the undersigned practitioner should any issues remain unresolved.

Respectfully submitted,
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³ 35 U.S.C § 102(a), emphasis added.